DOCUMENT P/N: P002168

INSTALLATION & OPERATING INSTRUCTIONS FOR

SmartLF Gx/GxT

Graphic Art &Technical Document Scanners

www.colortrac.com

MODEL		UPGRADE		THICKNESS	
Gx 25	☐	E	☐	MTM	☐
Gx 42	☐	C	☐		
Gx 54	☐	M	☐		

S/N: _____

Colortrac
Our Business is Your Image

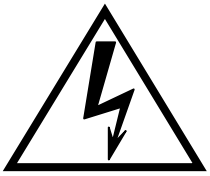
1. SAFETY PRECAUTIONS

To prevent fire or shock hazard do not expose the scanner to rain or moisture.

Do not cover the scanner with paper or drawings which might obstruct the unit's vents for long periods while the unit is being operated as this may lead to overheating and constitute a possible fire hazard.

Do not modify a desk mounted scanner by removing the rubber feet as this may impair the air circulation around the unit leading to possible overheating.

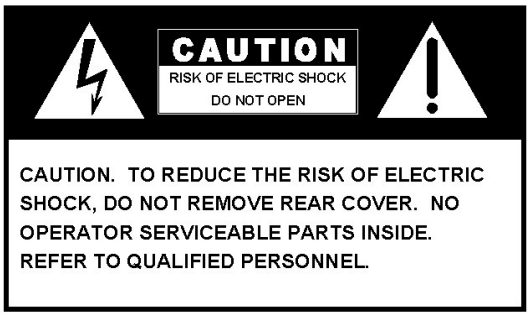
Avoid leaning heavily on the scanner when it is mounted on the stand as the unit could be damaged or become unstable and result in personal injury.



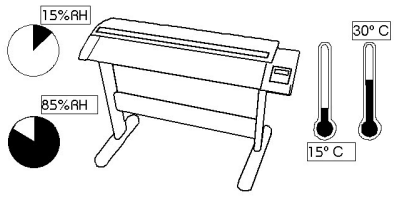
This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance instructions in the literature accompanying the product.

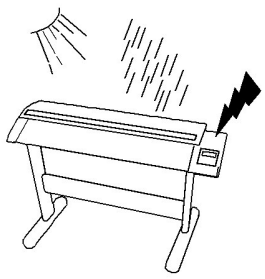
This symbol is intended to alert the user to the presence of important operating and maintenance instructions. The equipment being used constitutes a potential finger trap and could cause personal injury.


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION. TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE REAR COVER. NO OPERATOR SERVICEABLE PARTS INSIDE. REFER TO QUALIFIED PERSONNEL.

SAFETY INSTRUCTIONS



DO NOT expose the scanner to extreme temperature conditions (below 15ºC or above 30ºC)
DO NOT expose the scanner to extreme humidity conditions (less than 15% or more than 85% Relative Humidity).



DO NOT expose the scanner to direct sunlight, rain or storm.

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(The serial number of this unit will be required when seeking support or maintenance for SmartLF. Record it on the front page of this manual for easy reference).

3. MAIN FEATURES OF SMARTLF GX/GXT

- High-speed 1200 x 600 dpi optical resolution large format scanning engines in 3 widths
- Self-adjusting paper APT (Advanced Paper Transport) for scanning documents up to 20mm / 0.8" thick
- State-of-art Colortrac electronic design and signal processing technology
- Charge-Coupled-Device (CCD) imaging technology using self-contained camera modules
- Chemically treated, impact resistant scan glass to minimise scratching and damage during scanning
- Low maintenance design
- Advanced Media transport optimised for handling lower weight and lower stiffness papers
- High gamut RGB color, indexed color, grayscale and black and white scanning modes
- Desktop portable design with optional floor stand
- Simple to use and install USB2 computer interface (hot pluggable)
- On-scanner controls and display for main functions and status reporting
- Standard File, Copy and Email software included with scanner
- High-specification software application options for optimised scanning-to-file and copying-to-printer
- Low power consumption
- Computer and Repro stand options available

4. UNPACKING SMARTLF GX/GXT FROM ITS BOX

SmartLF Gx/GxT ships in a single double-skinned box. It is advisable to prepare a strong desk surface or similar area capable of taking the weight of the scanner. You will need an assistant to lift the scanner from its carton.

5. PARTS LIST

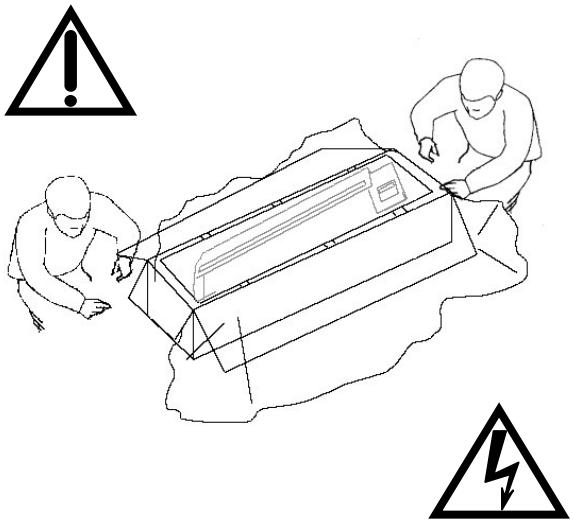
SmartLF Gx/GxT Installation & Operating Manual (this document) 1
Power cable (specified for country) 1
USB2 scanner data cable (2m) 1
Software installation CD (includes this manual in pdf format) and software option (if applicable) 1
Document Support Tray 3

6. LIFTING THE SCANNER FROM ITS CARTON

1. Make sure the scanner box is resting on the floor the correct way up (look at the name on the side).

2. With the help of an assistant remove the lid from the larger box and then take out the three foam spacers that protect the inner box. The inner box contains the scanner.

3. Remove the lid from the smaller box and pull back the plastic wrapping to expose the top of the scanner. WARNING: DO NOT TRY TO REMOVE THE SCANNER WHILE STILL INSIDE ITS PLASTIC WRAPPING AS THIS WILL MAKE IT MORE DANGEROUS TO HANDLE.



4. With two people, lift an end of the scanner each and begin to remove it from its packing carton. Observing correct lifting technique (i.e. bend knees and straight back) lift the scanner and position it carefully onto the working area or the optional floor stand. The choice of position for SmartLF Gx/GxT should allow proper air circulation around the device in accordance with normal office equipment practice.

5. The electricity supply should be taken from a switched output and be located within easy reach of the scanner operator.

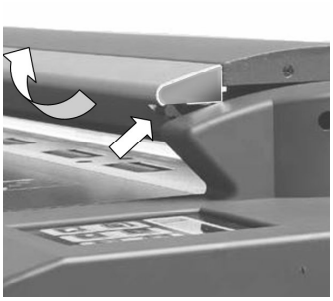
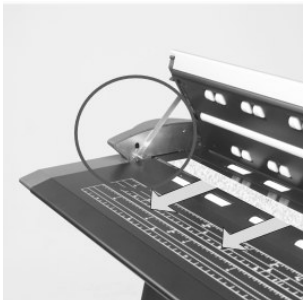
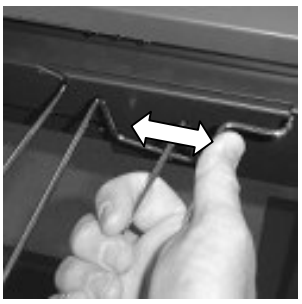
6. The computer used with SmartLF Gx/GxT should be located so as not to strain the USB cable or present a cable trip hazard to the operator or others.

7. Do not leave scanner components e.g. document support trays, cables and software) in discarded packaging.

7. REMOVING SHIPPING PROTECTION AND SETTING UP SMARTLF GX/GXT

Before attempting to use SmartLF Gx/GxT it is essential that the foam shipping layer which protects the scan glass is removed from inside the scanner:

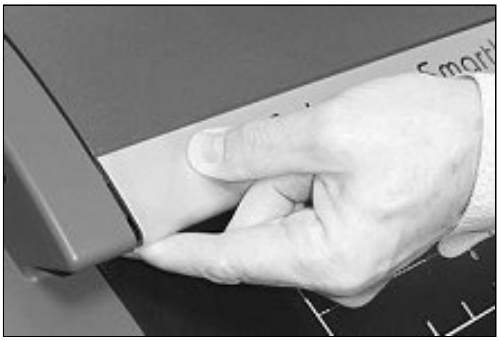
- Catches on each side of the scanner top cover are depressed to open the lid. Fit the support stay on the left-hand side (circled)
- Remove the piece of foam and retain with the packaging for the scanner (always replace this item when transporting SmartLF)
- While supporting the scanner lid with your right hand release and store the stay and then gently lower the lid to close it.
- Fit the three paper support trays by compressing (springing) them into the slots on the back of the scanner (the precise design may vary)
- Connect the scanner to the electricity supply using the localised cable provided

IMPORTANT – DO NOT CONNECT THE SCANNER TO THE COMPUTER UNTIL INSTRUCTED

8. GETTING ACCESS TO THE GLASS AND ROLLERS OF SMARTLF

The SmartLF Gx/GxT has a hinged clamshell style lid. Opening the lid provides access to the scanner optics. With the lid in the open position with the safety catch applied the scanner glass and rollers can be inspected and cleaned if required. On the GxT version the lid also raises (**parallel motion**) under motor control. Always **motor return** the lid to the fully closed position before attempting to open the lid for cleaning. Do not attempt to clean the glass through the document aperture as this could damage the lid raising mechanism.



OPENING THE LID

8.1 Always use two hands to open the lid by releasing both catches simultaneously and then lifting the lid to about 70 º

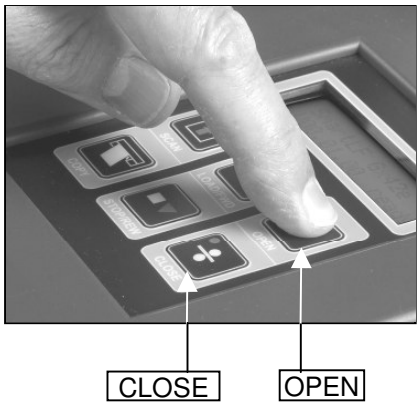
8.2 Move one hand to the centre of the lid to steady it while using the other hand to secure the safety catch.

It is essential to use the safety catch when cleaning or inspecting the scanner optics for dirt or dust contamination

WARNING

8.3 Do not allow the lid of the SmartLF Gx or GxT scanner to rest in the fully backward position. Instead always ensure the lid is held forward on the safety catch to avoid the risk of injury or damage to the scanner from the lid being allowed to fall into the shut position.

9. DOCUMENT THICKNESS CAPABILITY OF SMARTLF GX/GXT



SmartLF Gx and GxT scanners in closed mode can accept media up to 0.02" (0.5mm) thick. GxT scanners can be adjusted semi-automatically to accept documents between 0.02" (0.5mm) and 0.8" (20mm) in thickness.

LOADING A THICK DOCUMENT

9.1 Press and hold the OPEN button to raise the lid until the document gap is greater than the document thickness.
9.2 Insert the thick document
9.3 Press and hold the CLOSE button to lower the lid onto the document until the motor noise stops automatically.
9.4 Now scan your document using the mouse, F9 or the SCAN button as appropriate

DO NOT PRESS THE <u>OPEN</u> OR <u>CLOSE</u> BUTTONS DURING SCANNING, AS THIS WILL STOP THE SCANNER IMMEDIATELY

<u>AUTO PAPER LOAD IS DISABLED IN THICK DOCUMENT MODE</u>

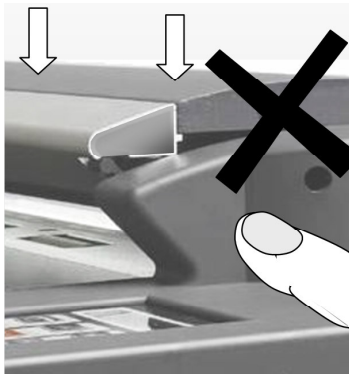
RETURNING SMARTLF GXT TO STANDARD THICKNESS MODE

9.5 Ensure that the scanner is not scanning or a document is being fed through the scanner
9.6 If a document is still in the scanner, support it while pressing the OPEN button and lift out the document rather than using the FWD or REW buttons. This prevents the weight of the overhanging document levering the trailing edge and causing it to be damaged or possibly damaging the scanner as it exits the rollers.
9.7 Hold down the CLOSE button to lower the lid until the motor noise stops automatically.

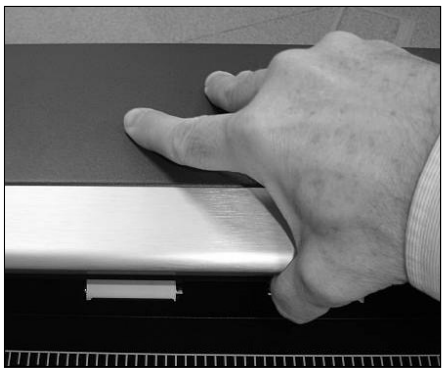
SmartLF Gx is now returned to standard thickness mode. Note that pressing OPEN or CLOSE during scanning will **stop** the scanner and is equivalent to pressing the STOP button.

10. CLOSING THE LID OF SMARTLF GX/GXT

To close the lid of the SmartLF Gx/GxT after inspecting the glass or cleaning the optical area, first check that there are no obstructions. Support the lid at the centre using the right hand and then with the left-hand release the safety catch. DO NOT ALLOW AN UN-PROPPED LID TO FALL FROM THE RAISED POSITION AS SERIOUS SCANNER DAMAGE MAY OCCUR. Carefully and evenly lower the scanner lid until both catches engage with their locks. It is not necessary to use extra pressure on the lid once the catches have engaged. (TIP – The lid may need to be lifted slightly to disengage the safety catch). THICK MEDIA - Always use the OPEN/ CLOSE buttons to lower the lid from the thick media position. <u>Never</u> exert pressure on the lid to close it from the raised position.



THICK MEDIA OPEN/ CLOSE



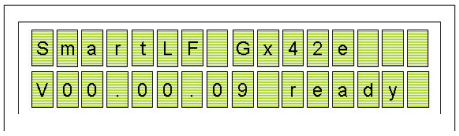
LOWERING

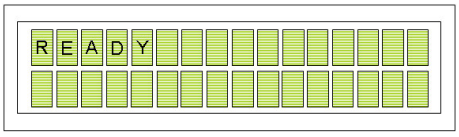
CLOSED

WARNING: KEEP FINGERS CLEAR OF THE SIDES OF THE SCANNER LID AT ALL TIMES

11. SWITCHING ON THE GX/GXT CCD SCANNER

SmartLF Gx/GxT can now be switched on. The liquid crystal text display (LCD) will light up and after a few seconds will display the word ' **Initialising**'. After about 35 seconds or so the display will change to the words **Scanner Warmup**. After a further 90 seconds the model number and firmware level of the scanner will be displayed. Paper can be loaded during the Warm-up period.





If a document is loaded the display will change to the word 'READY'

Start up Windows XP Professional / XP Home or Windows Vista (when released) on the connected computer that will be used with SmartLF Gx/GxT. Wait for Windows to finish loading. FOR MORE DETAIL ON MINIMUM SPECIFICATIONS FOR OPTIMUM SMARTLF GX/GXT PERFORMANCE SEE APPENDIX 1.

12. ESSENTIAL SCANNER OPERATING PROCEDURES

1. **FOR BEST RESULTS ALWAYS SWITCH ON YOUR SCANNER FOR AT LEAST 1 HOUR BEFORE USING**
2. **ALWAYS NORMALISE YOUR SCANNER BEFORE SCANNING**
3. **PERIODICALLY CHECK YOUR SCANNER (WHEN WARM) FOR OPTIMUM STITCH ALIGNMENT**

The SmartLF Gx/GxT scanner uses two fluorescent tubes to illuminate the scanning document. Like most fluorescent systems the light intensity produced changes significantly during the first 2 minutes and can take up to 60 minutes to reach full brightness and become completely stable. Also in a similar way to domestic fluorescent tubes the lamps in the scanner have a limited useful life as they lose brightness with age and must be replaced - usually after about 1 year of continuous operation. To offset the effects of tube ageing it is important to normalise (or calibrate) the scanner at regular intervals. This will restore the maximum white levels obtainable across the scanner's optical width even though the actual brightness of the tubes may have decreased slightly or become uneven. Never expect full colour performance from the scanner before it is properly warmed up or if it has reached its optimum temperature but not been normalised for some time.

WHY NORMALISE?

If the scanner is not normalised regularly image brightness may be incorrect or appear uneven across cameras (camera imbalance). If a recently normalised scanner still produces uneven scans it is probably not at its peak running temperature and should be left to stabilise. The warming-up process may take longer in colder operating environments.

Locate the Normalisation Target

The Normalisation and Stitch targets for SmartLF are shipped in a single paper wallet inside the scanner box. The normalisation target is the plain white sheet of paper and must be used matt side down in the scanner.

DO NOT USE THE GLOSSY SIDE TO NORMALISE YOUR Gx/GxT SCANNER

How to normalise SmartLF Gx/GxT

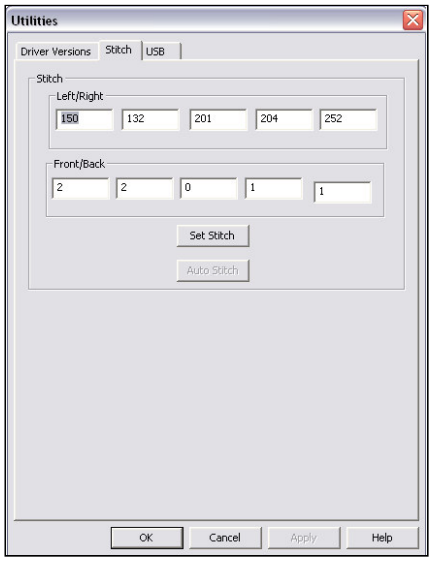
From power-on always wait at least 5 minutes before normalising and preferably 1 hour for best results. Start the SmartLF Gx Utilities program from the program folder or shortcut. If you have not already loaded Gx Utilities go to Section 16 'Installing Scanner software from the Installation CD'. The first dialogue box to appear contains the 'Full Normalisation' button.

Insert the Normalisation Target or any matte surfaced piece of clean white paper or card into the scanner long edge first and allow it to load, then click the **Full Normalisation** button to start the scanner normalisation process. The time taken for the normalisation process varies between different width scanner models but usually takes around 1-2 minutes.

Scanner switched off between scans in a constant temperature environment
Power on the scanner and wait for at least 5 minutes before scanning. For best results wait 1 hour before scanning. For optimum results re-normalise before scanning.
Scanner switched on continuously in a variable temperature environment
The scanner can be used immediately but for best results the room temperature should have stabilised before using the scanner and the temperature be the same as it was when the scanner was last normalised. If the temperature has recently changed by more than +/- 5 deg. C wait 1 hour before re-normalising and scanning.
Scanner switched on continuously in a temperature-controlled environment
To return optimal performance the scanner should be re-normalised daily or at least weekly or when any variation in image brightness or camera balance is noticed.
Changing the light tubes inside SmartLF Gx/GxT
The fluorescent light tubes inside SmartLF Gx/GxT are potentially dangerous and could cause injury if handled incorrectly. Colortrac recommend that only an approved Colortrac trained technician should change the fluorescent tubes as there is risk of electrocution if an attempt is made to change these without observing normal electrical safety procedures.

Disposal of old tubes
Old tubes that are no longer required should always be disposed of in a responsible and ecologically friendly manner. This usually means taking them to a recognised disposal company or agent. See the section on disposal at the end of this manual.

AUTOMATIC & MANUAL STITCHING OF GX/GXT SCANNERS



After shipping and as part of the installation and commissioning procedure the scanner should be checked for correct camera alignment. Before checking or carrying out a stitch maintenance cycle (camera re-alignment) the scanner should have reached room temperature and have been switched on for at least 1 hour (see Section 21). If room temperature changes permanently by more than 2 deg. C during regular scanning it may be necessary to re-stitch the scanner to maintain optimal camera alignment.

To check for satisfactory camera alignment use the Automatic Stitch Target (supplied) and ScanWorks or SmartLF and inspect a scan made at 600 d.p.i. in greyscale. If the scanner needs attention start the Colortrac Gx Utilities from the Windows program list (installed in Section 15) and go to the Utilities area. Insert the Auto Stitch target (supplied) and press Auto Stitch.

Should the stitch target become damaged, lost or the automatic process fails to work normally the Gx/GxT scanner can be re-aligned manually using any suitable original. Pressing the Set Stitch button will start the interactive manual re-alignment procedure.

13. THE WINDOWS XP .NET FRAMEWORK V2.0 ENVIRONMENT

The Colortrac SmartLF Gx/GxT software application has been created using Microsoft .NET in accordance with current Microsoft development practice. This means the connected computer running Microsoft Windows XP Home or XP Professional should be upgraded if required by installing the .NET Version 2.0 Redistributable using either the Colortrac CD or by following this link.

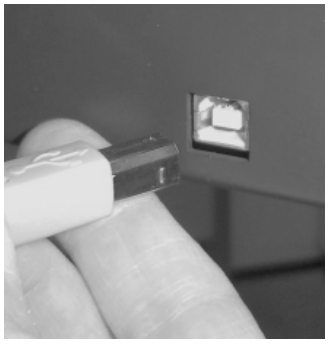
http://msdn.microsoft.com/netframework/downloads/framework1_1redist/

Although SmartLF Gx/GxT will work with Windows 2000 it is highly recommended that Windows XP with the latest Service Pack (SP) upgrade and Windows Vista (when released) is used with SmartLF Gx/GxT scanners. Colortrac advise that the .NET Framework be installed even if only using ScanWorks or CopySmart software options. SmartLF Gx/GxT is simple to use and can be run on any computer connected to the SmartLF Gx/GxT scanner without a license key.

NOTE: The belief is that in time .NET will become part of regular Windows and/or be included inside the regular Service Pack. See Appendix 3 in this document for more information on .NET Framework and how to check if it is installed on the computer you intend to use with SmartLF Gx/GxT.

14. CONNECTING THE USB2 CABLE TO SMARTLF

With SmartLF Gx/GxT switched on, locate the included USB2 cable and plug the smaller square end into the back of the scanner (see picture).



SMARTLF Gx / GxT SCANNERS MUST BE USED WITH A USB2 COMPUTER INTERFACE. ATTEMPTING TO USE SLOWER USB1.1 INTERFACES WILL CAUSE SMARTLF TO SCAN VERY SLOWLY AND POSSIBLE CALIBRATION MALFUNCTION MAY RESULT. THE COLORTRAC GX UTILITIES USB2 SPEED CHECK CAN CHECK IF YOUR USB2 INTERFACE IS OK

IMPORTANT: IF YOU ARE USING OTHER USB1.1 KEYS (DONGLES) ON THE SAME COMPUTER ENSURE THAT SMARTLF GX/GXT DOES NOT SHARE THE SAME USB INTERFACE INSIDE THE COMPUTER OR SCANNING SPEEDS MAY BE REDUCED.

DO NOT CONNECT SMARTLF GX/GXT TO THE PC YET!

15. PREPARING TO LOAD THE DRIVER

STEP 1

PLUG THE REMAINING END (FLAT SECTION) OF THE USB2 CABLE INTO A SPARE USB2 INTERFACE ON THE COMPUTER- THE DRIVER INSTALLATION WILL START AUTOMATICALLY.

NOTE: At this point Windows XP will detect the new hardware and display the following message in the System Tray area (normally the lower right-hand side of the screen).

AT THIS POINT WINDOWS SHOULD DETECT SMARTLF GX/GXT AND AUTOMATICALLY BEGIN RUNNING THE WINDOWS HARDWARE WIZARD. HAVE THE COLORTRAC SMARTLF GX/GXT SOFTWARE INSTALLATION CD READY.

WINDOWS ASKS FOR THE DRIVER – INSERT THE CD NOW!

STEP 2

Found New Hardware Wizard
Welcome to the Found New Hardware Wizard
This wizard helps you install software for:
SmartLF Gx
If your hardware came with an installation CD or floppy disk, insert it now.
What do you want the wizard to do?
Install the software automatically (Recommended)
Install from a list or specific location (Advanced)
Click Next to continue.
< Back
Next >
Cancel

WAIT for a few moments to allow Windows to start the Hardware Wizard. The wizard will take you through the next steps of the installation. The wizard will respond by displaying this screen.

NOTE: If the CD is not detected in the next step you will need to tell the Wizard to search for the drivers automatically by clicking the first button or direct the search manually by clicking the second button.

WINDOWS LOCATES AND TRANSFERS THE DRIVER FROM CD

STEP 3

At this point insert the SmartLF Gx/GxT CD containing the driver. After one or two seconds Windows will detect the CD and replace the wizard Welcome screen (STEP2) with the 'wizard searching' screen shown here.
IF THE SMARTLF GX/GXT CD STARTS THE CD MENU, PRESS EXIT AND ALLOW THE HARDWARE WIZARD TO CONTINUE INSTALLING THE DRIVER

NOTE: In case of difficulty select 'I will install the driver myself' and use 'Have disk' to manually direct Windows to the driver

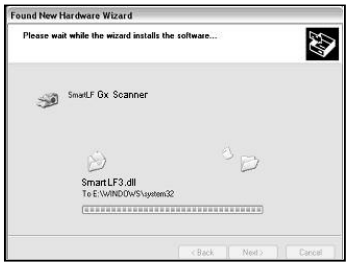
STEP 4

Hardware Installation
The software you are installing for this hardware:
SmartLF Gx Scanner
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

The Wizard will STOP because the driver is not recognised by Windows' logo testing system. Ignore this and click '**Continue Anyway**'

This is completely normal.

STEP 5



Windows transfers the driver to the scanner computer. Do not start other applications while this is happening.

STEP 6

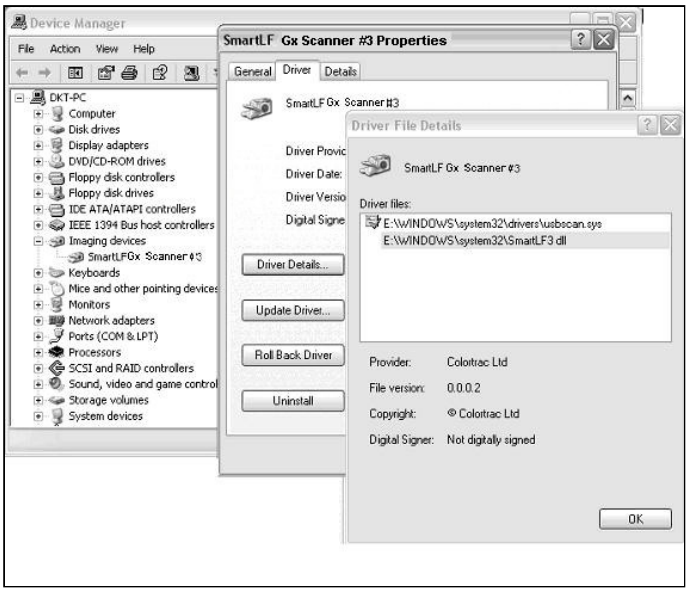
The Hardware Wizard will finish by showing this screen. Click the **Finish** button to complete the installation of the SmartLF Gx/GxT driver.

The driver is now installed. There is no need to reboot the computer.

NOTE: IF A DIFFERENT COMPUTER USB2 PORT IS USED WINDOWS WILL CREATE A NEW NUMBERED DRIVER ENTRY IN THE SYSTEM HARDWARE LISTING

The SmartLF Gx/GxT USB driver is now installed. Whenever the scanner is plugged into the computer, Windows will identify the USB (Universal Serial Bus) device as SmartLF Gx/GxT and automatically load this driver. The scanner can be plugged and disconnected freely like any regular USB device without needing to re-boot the computer.

CHECKING FOR THE SMARTLF DRIVER



The Windows system will allow the operator to check for correct installation of the driver. Should the driver ever be accidentally removed or require updating or in the unlikely event of the user experiencing problems with SmartLF Gx/GxT, this check can be useful.
Using the Windows Control Panel click on the System Properties icon. From here click the Hardware tab and look for the Imaging devices entry.
Right clicking on the SmartLF Scanner entry will bring up the Properties for the device where the status of the scanner is displayed. The status should be ' This device is working properly'

NOTE: When SmartLF is not connected or not powered-up '*SmartLF Gx/GxT Scanner*' will NOT be visible as an Imaging device in the Hardware listing of the Windows System.

16. INSTALLING SMARTLF S/W FROM THE SOFTWARE INSTALLATION CD

Insert the software installation CD. It should Auto-Play. If the CD fails to launch go to the CD drive using Explorer and double-click the launch file to start the installer manually.

1. The SmartLF CD guides the user through connecting the scanner, installing the software and utilities, lists the manuals available and provides details of the Colortrac third party software partners (CLASP). To go straight ahead and install the software click the 'Installing the Software' button

2. At the software installation screen proceed to STEP 1 to install the .NET environment if your computer requires it.

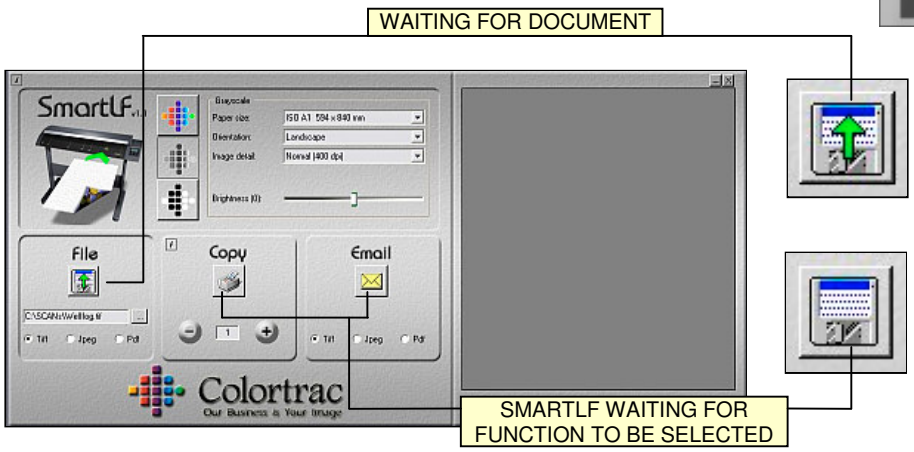
3. Click STEP 2 to install the SmartLF application.

Colortrac
Connecting to the PC
Installing the Software
Utilities
Manuals
CLASP
WELCOME
Welcome to the SmartLF installation CD. Use the navigation buttons for information on how to connect your SmartLF scanner to your PC and install the drivers and software in a few easy steps. Visit our web site www.colortrac.com for more information about our SmartLF scanners.
Kind Regards
The Colortrac Team.
SmartLF
contact us
exit

Once the installation is complete you will be able to locate the SmartLF program under Program Files > Colortrac > SmartLF.

You have now installed the SmartLF application.

Go to Programs from the Windows Start button and navigate to the SmartLF entry and release. After a small delay the SmartLF screen will display. Note that if the scanner is not powered up or the USB2 cable is not connected the software interface will appear grayed as shown below.

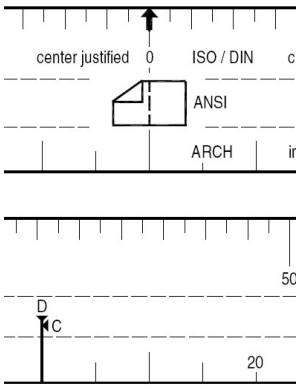


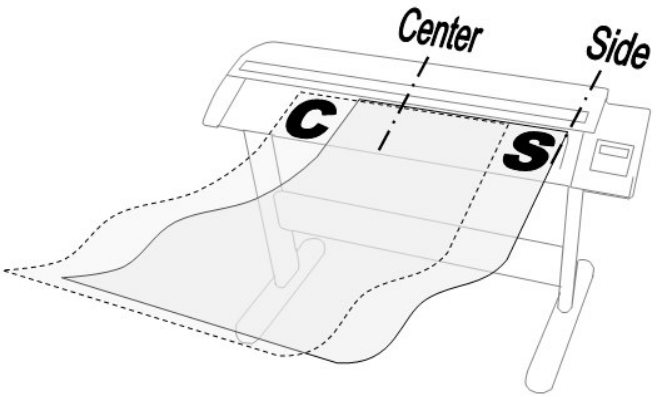
NOTE: The SmartLF application software is a batch program. Once started by clicking any one of the 3 main function icons the application will remain in ***ready to load*** mode and scan the next document automatically as soon as it is fed into the scanner. To allow a document to be loaded ***without*** being scanned, re-click or toggle the active (green arrowhead) function icon.

17. LOADING A DOCUMENT INTO SMARTLF GX/GXT

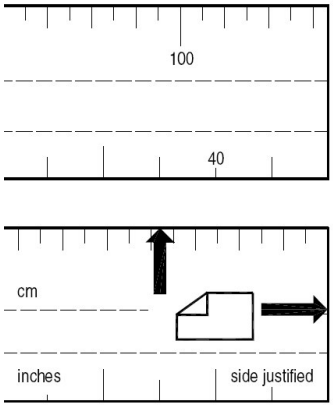
Normal thickness documents can be loaded into Gx/GxT center or right justified. Thick documents should always be loaded into the scanner center justified. All documents should be loaded into the scanner face-down. Use the rollers as a stop against which to square the document and wait for the scanner to take the document from you. If you need to re-position the document use the STOP/REW button to withdraw the document.

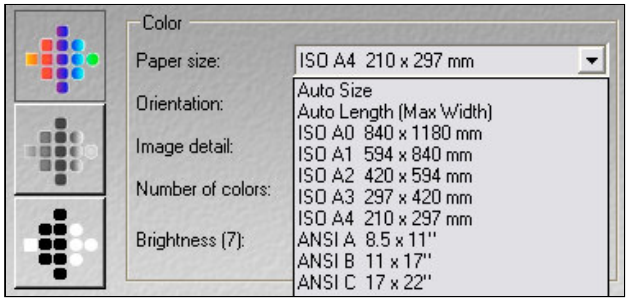
CENTER





SIDE




Color
Paper size:
ISO A4 210 x 297 mm
Orientation:
Image detail:
Number of colors:
Brightness (7):
Auto Size
Auto Length (Max Width)
ISO A0 840 x 1180 mm
ISO A1 594 x 840 mm
ISO A2 420 x 594 mm
ISO A3 297 x 420 mm
ISO A4 210 x 297 mm
ANSI A 8.5 x 11"
ANSI B 11 x 17"
ANSI C 17 x 22"

Colortrac SmartLF software (included as standard) is restricted to scanning in industry standard paper sizes, fully automatic size detect mode or full scan width with auto length detect mode. SmartLF software does not allow the operator to specify document sizes in mm or inches.

Auto Length (Max Width) allows the user to scan the full optical width of the scanner whilst detecting the length of the document automatically. As soon as the READY status is displayed (usually after 35 seconds from switching on the scanner) the first document can be loaded.

UNDERSTANDING THE CONTROLS OF SMARTLF

AUTO SmartLF Gx/GxT document loading is fully automatic. The document is detected using optical sensors located near the center and at the side of the scanner nearest the control panel.

With two hands, place the document on the scanner with the longest edge (if possible) towards the scanner opening. The document is now pushed against the stationary rollers, 'squared up' and held in this position. The display will change to 'LOAD' as SmartLF Gx/GxT detects the media. After approximately one second SmartLF Gx/GxT will start to load the document. After the document is loaded the display will return to 'Ready'

When a document is loaded and the SmartLF software (or ScanWorks and CopySmart optional software) is running, either the software icons or the scanner panel buttons can be used to start and stop the scanning process. The panel display will show the word 'Scanning' just before and during movement of the document through the scanner.

REMOVING A LOADED DOCUMENT/ CORRECTING A SKEWED DOCUMENT

Pressing the red STOP / REWIND button on the Gx/GxT panel during or after a document has been loaded will REWIND the document. The document will rewind for as long as the button is held down. This is useful when a document skews slightly, loads awkwardly or needs to be rotated to present a better or longer side to the scanner.

A document can be rewound at any time. The STOP button may be pressed during display of the 'Abort load?' message.

ADVANCING (FORWARD FEEDING) THE DOCUMENT

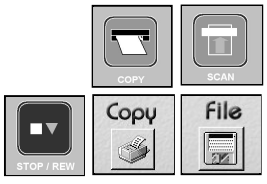
After a document is loaded pressing this button will ***forward advance*** the document. SmartLF Gx/GxT will move the document for as long as the button is held down.

EJECTING THE DOCUMENT

After a scan has completed and where the software is instructed to ***hold*** the document, this button can be used to ***eject*** the document from the rear of the scanner.

STOPPING SMARTLF GX/GXT WHEN UNDER PROGRAM CONTROL

STOPPING SMARTLF GX/GXT

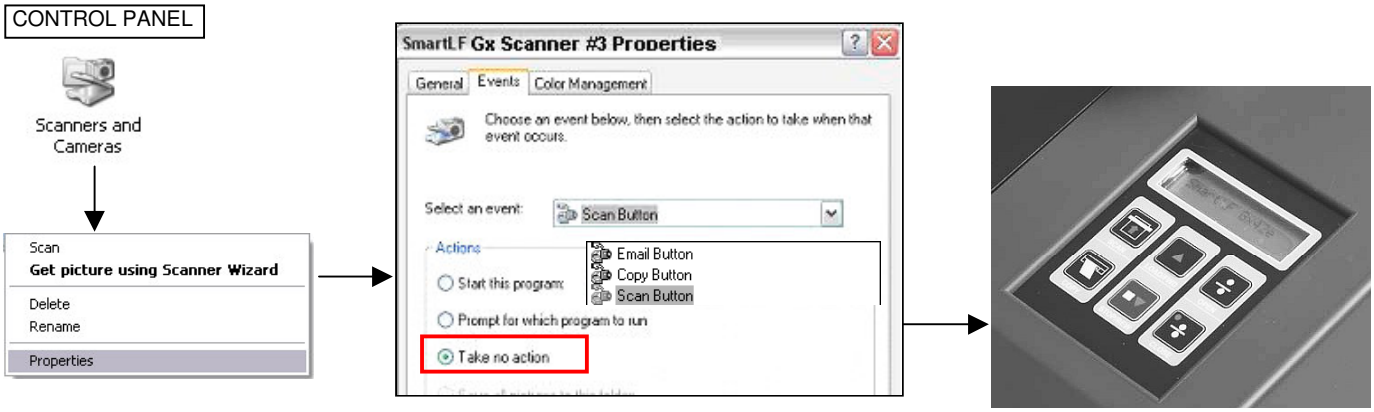
SmartLF Gx/GxT	During scanning, press **STOP** / **REW** to stop the scanner and abort a scan. The display will show the message '**Rewind?**' At this point the operator can press **STOP** / **REW** again to rewind the document or *do nothing* to have the document stay at its current position. A loaded document can be rewound at any time using the **STOP** / **REW** button [1]
SmartLF 	Toggling[2] the software **FILE**, **COPY** or **EMAIL** icons will stop an operating scanner Toggling[2] the panel **STOP** / **REW**, **SCAN** and **COPY** buttons will stop the scanner momentarily. To prevent SmartLF restarting itself and continuing to batch process the next document toggle the relevant FILE, COPY or EMAIL buttons on-screen. Pressing the scanner **STOP** / **REWIND** button will rewind the document from the front of the scanner if the scanner is already stopped.

ScanWorks 	Toggling[2] the software **SCAN** icon or pressing the panel **STOP** / **REWIND** button will stop the scanner. If the software has been set for *Eject on Save or Delete* the document will be ejected. If ScanWorks has been set for *Do nothing* the document will remain in the scanner. Press the LOAD/FORWARD or STOP / REWIND button to remove a document.

NOTES: 1.The behaviour of the scanner will depend on the software driving the scanner and how it has been configured.
2. Toggling means pressing the same function button a second time i.e. once for ON and again for OFF.

18. WINDOWS XP AND PANEL CONTROL OF THE SCANNER

The XP Windows Image Acquisition Device Driver Interface (WIADDI) supports custom scanner interfaces allowing SmartLF Gx/GxT hardware to start key program operations. The SmartLF Gx/GxT scanner SCAN and COPY buttons can be used to start and stop these primary software functions from the scanner control panel instead of, or in conjunction with the software. They operate with the standard SmartLF, ScanWorks and CopySmart software but only with the Windows XP operating system. To set up the panel buttons go to the Windows XP Control Panel and set the properties for 'Scanners and Cameras' to <u>TAKE NO ACTION</u> as below.



<u>IMPORTANT</u>: TO START SCANNING OR COPYING FROM THE SCANNER PANEL WHILST USING SMARTLF S/W, THE RELEVANT BUTTON ON THE SCANNER **MUST** BE PRESSED <u>FOR AT LEAST 0.5 SECONDS</u>

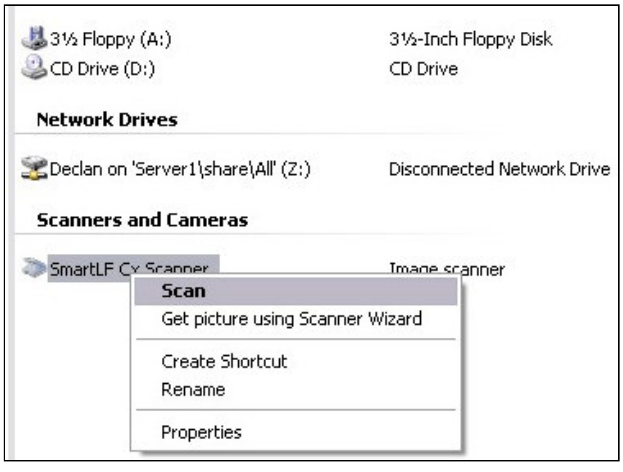
19. TESTING AND SCANNING USING ONLY THE DRIVER (WIA)

After the SmartLF driver has been installed Explorer should show the scanner (must be powered and connected) under **Scanners and Cameras.** If it is not visible click **Scanners and Cameras** in the **Control Panel.**

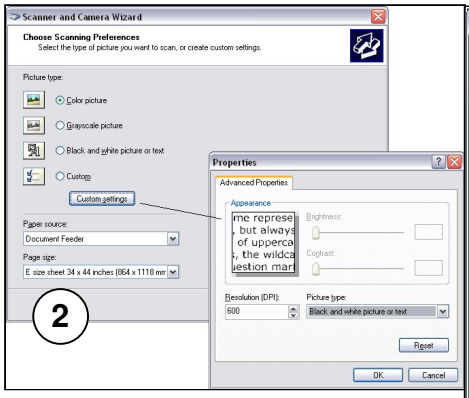
By right-clicking the Explorer entry then clicking **Scan** or **Get picture using Scanner Wizard** the user can force the scanner to scan to file.

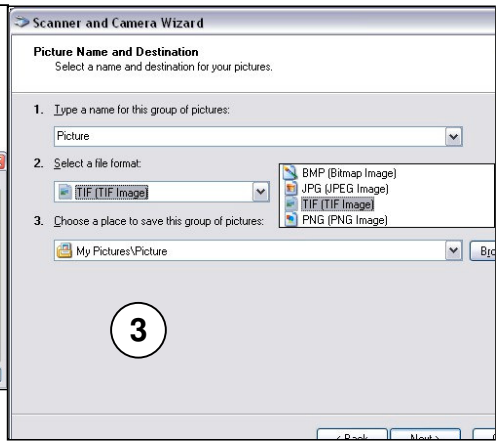
Alternatively using the **Select TWAIN source** and **Acquire** options from the **File** pull-down of most Microsoft scanner-friendly applications the SmartLF user can scan directly into the application (no file necessary). See screenshot.

NOTE: The scanner WIA driver (Jan 2007) is not yet compatible with Twain/ WIA acquire software expecting automatic switching to WIA.

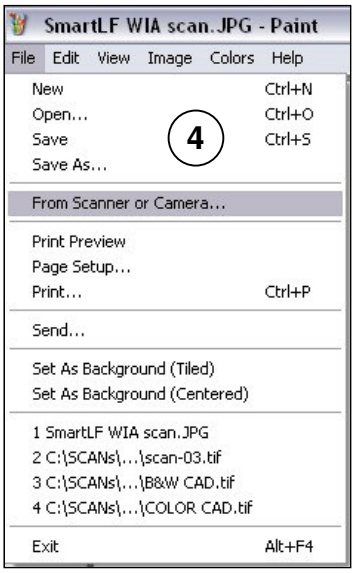


Scanner and Camera Wizard
Welcome to the Scanner and Camera Wizard
SmartLFGx Scanner
This wizard helps you copy pictures from your camera, scanner, or other device to your computer, your network, or the Web.
1
To continue, click Next.
Back
Next >
Cancel




Scanner and Camera Wizard
Picture Name and Destination
Select a name and destination for your pictures.
1. Type a name for this group of pictures:
Picture
2. Select a file format:
TIF (TIF Image)
BMP (Bitmap Image)
JPG (JPEG Image)
TIF (TIF Image)
PNG (PNG Image)
3. Choose a place to save this group of pictures:
My Pictures\Picture
3
< Back
Next >

Below - using the WIA driver inside an application. This works in a similar way to TWAIN by placing the scan information directly into the application.



Scan-to-file

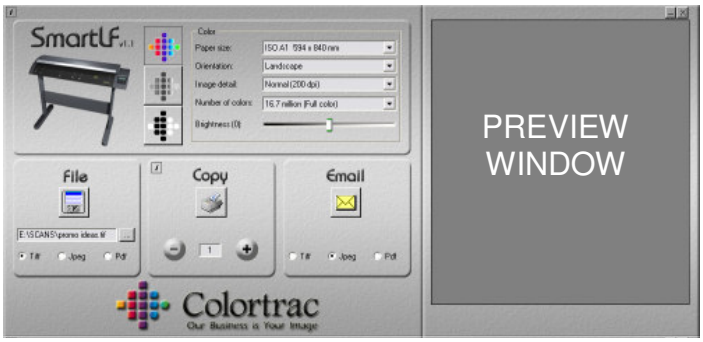
1. The Scanner and Cameras Wizard
2. Changing color mode, altering size and resolution
3. Selecting file format

Scan-to-application (similar to TWAIN)

4. Accessing the scanner from MSPaint
5. Scanning (downloading) into MSPaint

For control over image brightness SmartLF must be operated using Colortrac SmartLF multi-function software or the ScanWorks application (option).

20. YOUR FIRST SCAN TO FILE WITH SMARTLF MULTI-FUNCTION SW



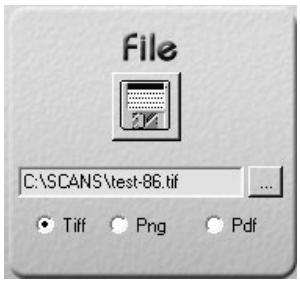
SmartLF Gx/GxT is designed to make scanning-to-file, scanning-to-copy and scanning-to-email extremely simple to achieve.

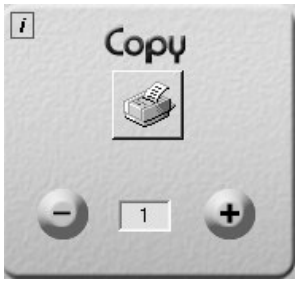
Note that Colortrac recommend the emailing function be used for black and white TIFG4 technical drawings or small, low detail color scans only.

Load a document into SmartLF Gx/GxT **NOW**

(Until a document is scanned and displayed in the preview window, no zoom and crop tools are visible)

SMARTLF GX/GXT 'SCAN-TO- ' FUNCTIONS





FILE - SmartLF Gx/GxT scanning to file is started by pressing the diskette icon in the **File** button. First use the Browse button to select the storage location for the new file.

COPY - To have SmartLF Gx/GxT scan to the Windows printer press the printer icon in the **Copy** button. First select the target Windows printer where the copy will be printed first using the I-button.

EMAIL - To have SmartLF Gx/GxT scan to e-mail press the envelope in the **Email** button. This requires a configured email client to be set up first, e.g. Outlook Express.

NOTE: For fragile originals SmartLF Gx/GxT can be slowed down using the Quality slider accessed from the i-box in the top left corner of the SmartLF interface. As soon as the required function is selected SmartLF Gx/GxT begins to scan the document loaded in the scanner or waits for the document to be loaded. SmartLF Gx/GxT will display the animated icon showing a document being loaded into the scanner.

PRESSING THE RUNNING FUNCTION ARROW ICON STOPS SMARTLF GX/GXT

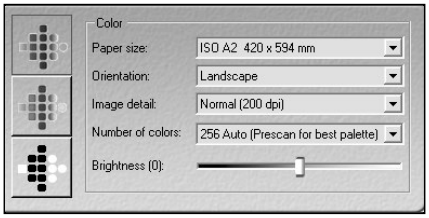
SmartLF Gx/GxT can also be controlled from the scanner's control panel by pressing the corresponding panel buttons. These will only operate the SmartLF software if they have been correctly configured through the Windows XP *Cameras and Cameras* icon that is located in the Windows XP Control Panel. Refer to Section 17.

SCAN

COPY

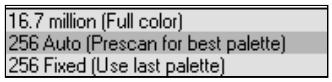
ARROW MEANS – '***WAITING FOR A DOCUMENT TO BE LOADED***'

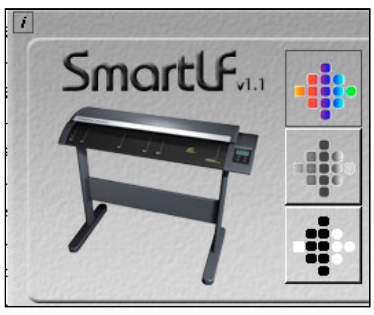
SMARTLF COLOR MODES AND SPEED SETTINGS

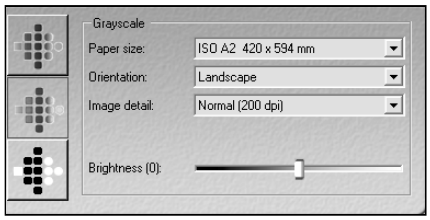

Color
Paper size: ISO A2 420 x 594 mm
Orientation: Landscape
Image detail: Normal (200 dpi)
Number of colors: 256 Auto (Prescan for best palette)
Brightness (0):

COLOR

The color mode allows control of the number of colors and the brightness of the file, copy or emailed document image

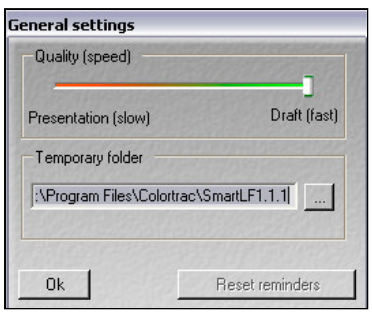


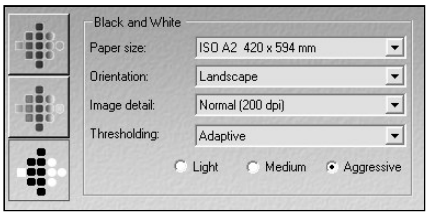




GRAYSCALE

The grayscale mode allows control of the brightness of the file, copy or emailed document image





BLACK AND WHITE

The black and white mode allows control of the type and degree of thresholding of the file, copy or emailed document image

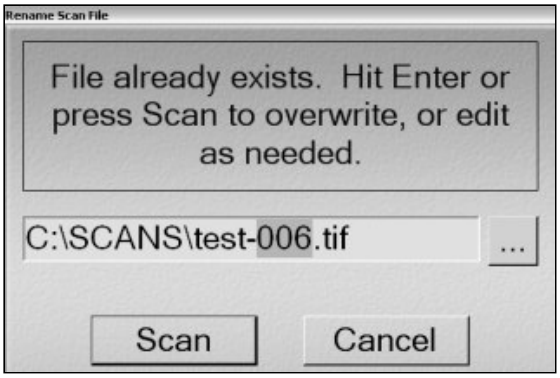
SmartLF Gx/GxT can be slowed down if necessary by using the **Quality** slider found under the i button at the top left corner of the SmartLF interface.

SMARTLF USES INTELLIGENT FILE OVERWRITE/ RENAMING

If a file already exists inside the computer directory with the same name as the name the operator is about to use for a new scan, SmartLF will try to assist.

- *If the file does not contain numerical information SmartLF pre-selects (blocks) the name part of the file ready for the operator to type in a new name.*

- *If the file contains numerical information SmartLF pre-selects ONLY the numerical part ready for the operator to type in a new number.*

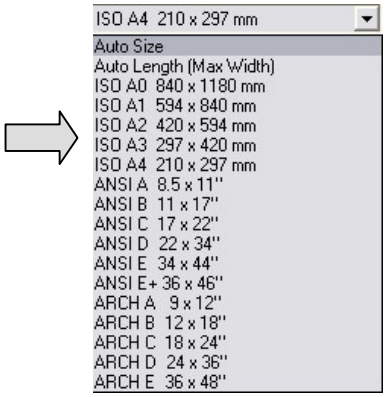


AUTOMATIC DOCUMENT SIZING

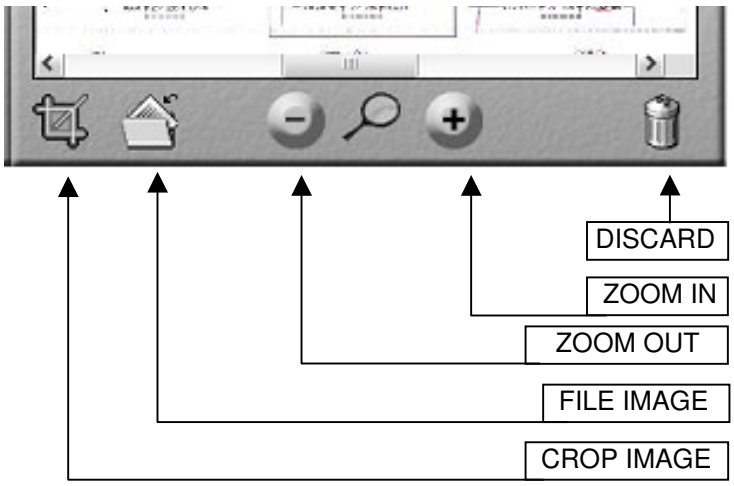
SmartLF Gx/GxT scanners will detect the size of a loaded document if there is sufficient gray contrast between the edges of the document and the inside of the scanner. On occasions automatic size detect may not be successful.

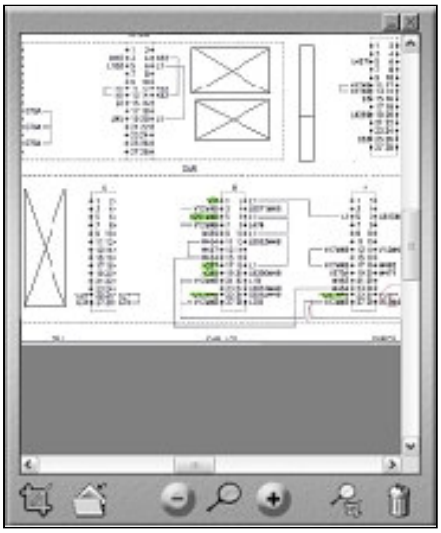
If the document is undersized when using auto-detect select a paper size larger than the document to be scanned and use the crop feature in the section below to reduce the size of the image before re-saving it.

NOTE: The effectiveness of Auto Size can be affected by the type of media loaded in SmartLF Gx/GxT. For example transparent or non-square media may fail to auto size correctly.


ISO A4 210 x 297 mm
Auto Size
Auto Length (Max Width)
ISO A0 840 x 1180 mm
ISO A1 594 x 840 mm
ISO A2 420 x 594 mm
ISO A3 297 x 420 mm
ISO A4 210 x 297 mm
ANSI A 8.5 x 11"
ANSI B 11 x 17"
ANSI C 17 x 22"
ANSI D 22 x 34"
ANSI E 34 x 44"
ANSI E+ 36 x 46"
ARCH A 9 x 12"
ARCH B 12 x 18"
ARCH C 18 x 24"
ARCH D 24 x 36"
ARCH E 36 x 48"

THE SMARTLF PREVIEW WINDOW





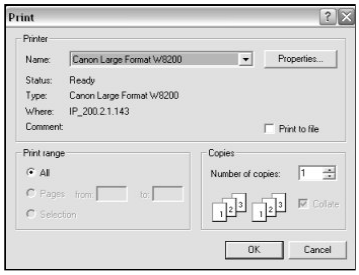
CROPPING IN SMARTLF

Use SmartLF CROP IMAGE to select an area of the image for scanning to file, to the Windows printer or email.

Pressing the CROP IMAGE icon on the Preview toolbar places a green crop square onto the currently displayed image. Use the grips at the corners to resize the crop boundaries. Clicking and holding the mouse button down on the centre of the square will move it across the image.

COPYING FROM SMARTLF

SmartLF software uses any standard Windows printer driver for copying. The number of copies can be controlled from the COPY button by clicking on the + and – icons.



The print quality of the copy is controlled from the Windows driver Properties dialogue in the normal way.

SmartLF will copy all images at 1:1 i.e. no scaling will take place unless set up in the Properties dialogue of the windows printer driver.

DOCUMENT SIZE MARKINGS ON THE SCANNERS

To scan a non-standard size of document select a document size that is larger than the document you need to scan. The SmartLF software will allow 'cropping' (removal of unwanted square edges from) of the image before saving it to computer. If the document is rectangular the *auto-sizing* option will detect the width of the document and determine the length of the document automatically.

SIZE	ISO/DIN	SIZE	ANSI	SIZE	ARCH
B0	1000mm x 1414mm				
A0	841mm x 1189mm	E	34in x 44 in	ARCH E	36inx 48in
A1	841mm x 594mm	D	34in x 22 in	ARCH D	36in x 24in
A2	594mm x 420mm	C	22in x 17 in	ARCH C	24in x 18in
A3	297mm x 420mm	B	17in x 11in	ARCH B	18in x 12in
A4	297mm x 210mm	A	11in x 8.5in	ARCH A	12in x 9in

NOTE: Auto-sizing may not be 100% effective for all types of document.

TRANSPARENT AND OPAQUE ORIGINALS

SmartLF will set-size scan and auto-size scan, clear and opaque media. Clear acetate drawings will often produce betters results when used with a white backing sheet. A scanning wallet with an integral white backing sheet can be effective. Auto-size detection may not work every time and may depend on the calibration quality of the scanner.

DOUBLE-SIDED ORIGINALS

Originals that have information on both sides can sometimes benefit from being scanned with a black backing sheet placed behind the image to be captured. Wallets with a black backing surface and clear acetate front can be useful.

THICKNESS OF MEDIA COMPATIBLE WITH SMARTLF GX/GXT

SmartLF Gx/GxT is compatible with many types of media including synthetic, polyesters, Mylar and general office tracing and inkjet papers. The accuracy of SmartLF Gx/GxT is valid for media up to 0.8mm thick and may vary depending on the operating environment. With SmartLF GxT the document thickness limit raises to 20mm.

STIFFNESS OF MEDIA COMPATIBLE WITH SMARTLF GX/GXT

SmartLF Gx/GxT will handle all regular media of 60g/m^2 and above. Paper below this weight can have very low stiffness (for example some newspapers) and these may become creased in the scanner unless protected inside a suitable scan wallet. Wallets can be readily obtained from stationery suppliers or improvised by folding some clear acetate and placing the document into the fold. Best results are obtained by loading the wallet fold-first into the scanner.

21. SCANNER MAINTENANCE

SmartLF Gx/GxT will need some occasional glass cleaning and white calibration (normalisation) maintenance. For best results follow the instructions below.

GLASS CONTAMINATION, SCRATCHING AND REPLACEMENT

The single SmartLF Gx/GxT scanner CIS glass cover is chemically treated and should resist scratching from paper clips, abrasive dust and staples but Colortrac recommend that the operator take all reasonable steps to ensure that scan documents are clean and free from metallic appendages and abrasive dust or other contaminants. The scan glass should be cleaned with a low-smear, high quality glass cleaning product and a clean lint-free cloth.

If streaking of the scanned image is seen after careful inspection and cleaning of both sides of the scanner glass some dirt may have been incorporated into the normalisation at the last calibration. The scanner should then be re-normalised using the *matte* side of the calibration target making sure it is clean and free from deep creases. NOTE: The scanner must have reached its normal operating temperature prior to recalibrating. See section 21 below.

In the event of the glass becoming badly scratched and affecting scans a replacement can be ordered from your Colortrac supplier. Replacing the glass will not affect the alignment or stitching of SmartLF Gx/GxT and does not require a technician.

Picture: Removable / replaceable glass cover of the Gx/ GxT scanner

If vertical lines still occur through the scanned image it may mean that dust or dirt has found its way into one of the Digital Camera Unit modules. You can attempt to remove it but you must follow the instructions below very carefully or an EXPENSIVE REPAIR MAY BECOME NECESSARY.

1. AVOID the use of canned air or aerosols of compressed air if at all possible as these rarely contain only clean air. If you must use canned air -

    - Ensure you use a brand intended for optics and not one for general electronics. Commonly available products often contain propellants and produce other residues that will dry and contaminate the surface you are trying to clean.
    - Never shake the container before use as this will mix the propellant with the 'air'.
    - Always try to keep the container upright when in use.
    - Always use strong bursts - DO NOT progressively squeeze the trigger, as this may cause nozzle splutter.
    - Always start the jet away from the optics first to clear the nozzle before directing onto the optics.
    - Always spray test the product on some old dark glasses or dark shiny plastic to check for signs of residue.
    - Be aware that an almost empty can draw propellant and other residue into the air stream.

2. TRY IF POSSIBLE to find a hand air pump without a tip brush similar to the type used for cleaning cameras. Various brands of these are available but a particularly good example is the Rocket Air Pump obtainable from good camera accessories shops or on-line. These devices use an inlet valve that prevents dirt from being sucked back into the bulb between blasts and supply clean, contaminate-free air. Do not allow the nozzle to physically touch the optics.

3. AVOID using brushes or general brand wipes as these can scratch the optics.

4. AVOID touching any of the components with the fingers, as this will leave a grease film and cause blur.

5. AVOID the use of acetone, ethanol, alcohol and other solvents unless they have been formulated specifically for cleaning optical surfaces. WARNING! Most of these solvents are hazardous to health.

6. If you suspect the mirror, lens or CCD to have been coated with a residue (e.g. from canned air or other cleaning agents) we recommend you contact your Colortrac agent immediately.

Other serious maintenance issues such as electronic or a suspected internal mechanical failure should always be referred to your approved service agent for diagnosis and repair.

22. FIELD UPGRADE OF SMARTLF GX/GXT TO A HIGHER MODEL

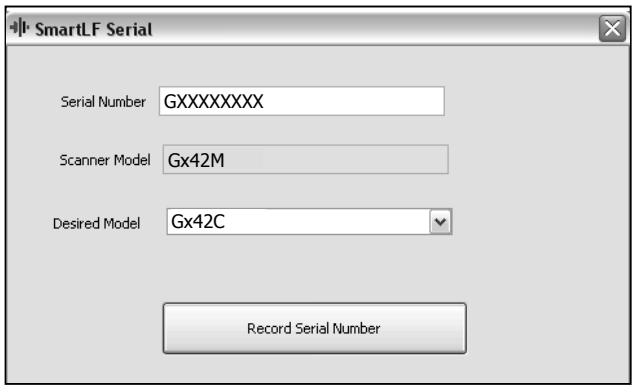
If your scanner is a model Gx/GxT m (mono only) or Gx/GxT c (low speed color) SmartLF Gx/GxT it can be upgraded by purchasing one of the three SmartLF Gx/GxT Field Upgrade products available. The upgrades are ordered by Product Code.

The process for model upgrading is as follows:

STEP 1 – GENERATE THE UPGRADE FILE USING THE SMARTLF GX/GXT SERIAL PROGRAM

1. Confirm that SmartLF Gx/GxT is connected and working (i.e. driver installed properly)

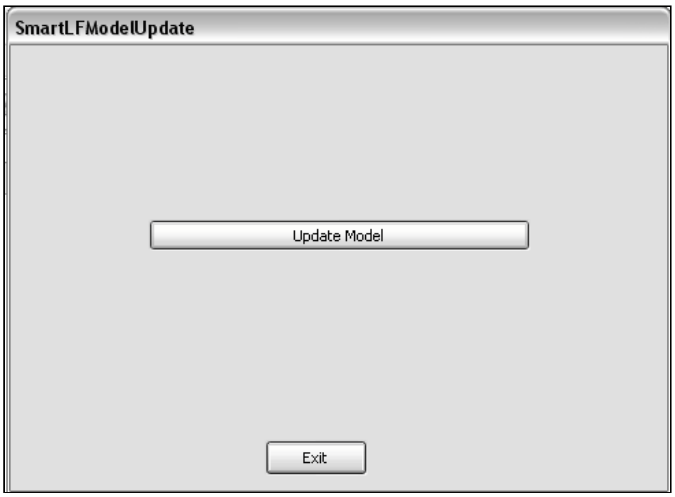
2. From the SmartLF Gx/GxT distribution CD locate the SmartLF Gx/GxT serial.exe program which is inside the Scanner upgrade folder (itself inside the Utilities folder). You may need to alter your Explorer viewing options to see the full .EXE extension of this file.
3. Double-clicking "SmartLF Gx/GxT Serial" will retrieve the Scanner model number from the attached SmartLF Gx/GxT scanner (in this case a Gx/GxT m).
4. In the Serial Number box type in the 8-digit number printed on the label attached to the back of the scanner.
5. Now select the model you wish your unit to be upgraded to using the Desired Model scroll bar
6. Press the 'Record Serial Number' button to create the upgrade file.



STEP 2 - SEND THE UPGRADE FILE WITH YOUR ORDER AND THE PRODUCT CODE YOU REQUIRE TO YOUR SMARTLF GX/GXT SUPPLIER TO OBTAIN YOUR UPGRADE PROGRAM

(The upgrade options for a Gx/GxT 42 are provided as an example – different part numbers will apply to the Gx/GxT 25)

Product Code	Upgrade from	Upgrade to
P005043	42m	42c
P005044	42m	42e
P005045	42c	42e



STEP 3 – UNPACK THE UPGRADE PROGRAM

7. The supplier will send you a file that has the serial number of the scanner to be upgraded as part of its name. Unpack this file to a temporary directory and run the program named "SmartLF Gx/GxTModelUpdate.exe". Click the button labelled 'Update Model'. This will then upgrade the connected SmartLF Gx/GxT scanner and display the words, 'Scanner firmware updated OK' on the scanner display.
8. Exit the program and then turn SmartLF Gx/GxT OFF. Wait for 5 seconds before turning the scanner back ON again. Check the scanner display and verify that SmartLF Gx/GxT is displaying the model type consistent with the upgrade process just carried out i.e. that the upgrade has been successful.

23. APPENDIX 1 - COMPUTER REQUIREMENTS FOR SMARTLF GX/GXT

The minimum computer specification needed to achieve the stated SmartLF Gx/GxT performance is as follows:

Operating system: Windows XP or Windows Vista (see note 4)
Processor: At least 2.8GHz, DUAL CORE (AMD), CORE-DUO (Intel) or HT (Hyper Threading) processor
Memory: At least 512MB RAM
Data port: A USB2 compatible interface (see note 5)

Notes:

1. The scan rate is proportional across the full range of resolutions supported by the scanner. Actual scan times will depend on the host system performance. The quoted scan accuracy is valid for media up to 0.8mm thick and may vary depending on the operating environment and the type & thickness of media. SmartLF Gx/GxT scanners are tested using a Mylar target at 20^{0}C +/- 3^{0}C, 60% +/- 10% RH with the media feed set to standard. Some advanced features may not be available in Windows 2000. Contact your supplier for advice on the optimum system configuration for your application. Colortrac Ltd reserves the right to change or amend specifications without notice. Colortrac and Smart LF are trademarks of Colortrac Ltd. All other trademarks are the property of their respective owners. Copyright © 2005 Colortrac Ltd.

2. Windows XP is a mandatory requirement to make available operation of the scanner from the control panel. For Windows 2000 users there may be limitations on the operational control available through the SmartLF Gx/GxT control panel. This may change without notice.

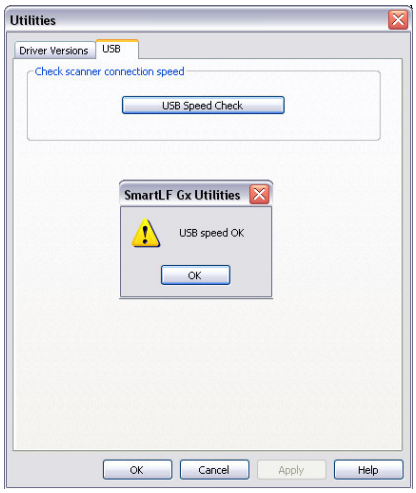
3. The Microsoft .NET environment is a Windows XP Service Pack Update. .NET is necessary for operation of the SmartLF Gx/GxT standard SmartLF graphical user interface and MUST be loaded as part of the operating system. Microsoft fully supports the distribution of this enhanced environment and has committed to embodying this into the standard Windows XP operating system– date unknown at this time.

4. Windows 98,ME,NT4 and Windows 2000 Server are not compatible with SmartLF Gx/GxT. 64-bit scanner drivers require 64-bit computer and 64-bit operating system

5. It is not recommended to use SmartLF scanners with computers only having a USB1.1 interface specification. Speed and function will be affected.

24. APPENDIX 2 - HOW TO CHECK FOR A USB2 INTERFACE

It is very important that SmartLF Gx/GxT is connected to a computer that has a USB2 interface. USB2 is approximately 40 times as fast as the older USB1.1 standard. Run the **Gx/GxT Utilities** program and press the USB tab to run a check on the speed of the USB interface to which the scanner is connected.

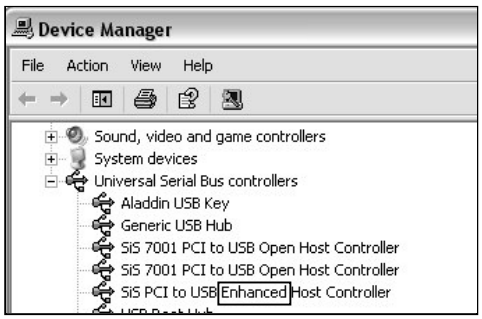


If the speed is OK and the interface passes the test, SmartLF Gx/GxT should operate in accordance with the published specification.

If the USB interface fails the test this could be due to one of the following:

- This is a computer with a USB1.1 port (a pre-USB2 machine)
- A USB2 port could be available but a USB1.1 device is sharing the connection
- The USB2 port could be faulty or the cable may be too long
- The USB2 interface of SmartLF Gx/GxT may be damaged

As an additional check it is wise to inspect the Properties of the USB interface via the Device Manager of Windows' Control Panel. Expand the Universal Serial Bus Controller device. If one of the USB sub-branches contains the word '**enhanced**' then the PC is likely to have a USB2 driver loaded on one of its USB ports. Unfortunately this does not guarantee that the scanner is plugged into the port using the USB2 driver.



Computers often have multiple USB ports and some more than one USB controller. If SmartLF Gx/GxT has been successfully installed on a computer but the scanner connection is changed to a different USB port (for example on the rear of the computer) this will cause the driver to be installed again. This is effectively a new installation.

NOTE: Every port can potentially have a different version of the SmartLF Gx/GxT driver loaded for it so if you have recently upgraded the driver for SmartLF Gx/GxT and changed the USB port you regularly connect through you should check the driver level using the Properties tab. Always reboot after updating a USB driver.

25. APPENDIX 3 - WINDOWS .NET FRAMEWORK ENVIRONMENT

The Microsoft .NET Framework allows users to run applications developed using the .NET Framework like the Colortrac SmartLF application. If the .NET Framework is not installed on the scanner computer the SmartLF program may load and display onscreen but will not be able to communicate effectively with the scanner.

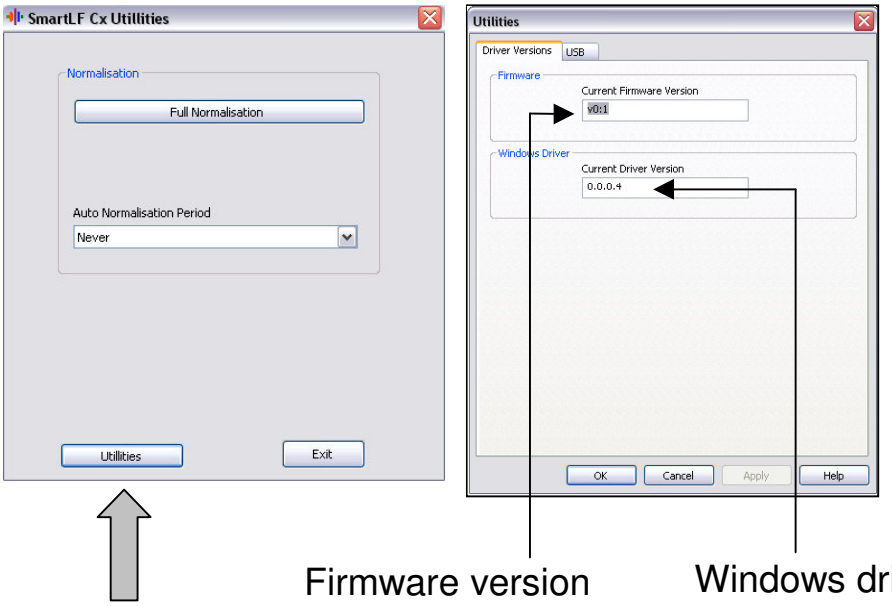
CHECKING FOR AN EXISTING INSTALLATION OF MICROSOFT .NET FRAMEWORK

Go to the Windows Control Panel and look for the highest number .NET entry in the programs listing.

(Microsoft Windows XP shown)

If you are using Windows Server 2003 the .NET Framework is installed by default. Microsoft Windows Vista™ installs .NET 3.0 automatically and most Windows XP Home and Windows XP Professional installations (if they are taking advantage of the Windows Automatic Update service) will already have .NET 2.0 installed. SmartLF users can upgrade their XP machines to .NET V3.0 but there is no technical or performance reason for doing this.

26. APPENDIX 4 - DRIVER AND FIRMWARE GX/GXT UTILITIES PROGRAM



Run the SmartLF Gx/GxT Utilities program from the Windows Program menu bar to discover the driver level and firmware revision installed in your Gx/GxT You may be required to supply this information to your equipment provider if you experience technical difficulties with the scanner.

Your SmartLF Gx/GxT scanner can be upgraded online. Please ask your SmartLF distributor or dealer about this facility.

27. APPENDIX 5 - WARRANTY INFORMATION

SmartLF Gx/GxT is warranted for a period of twenty-four (24) months from the original date of supply against defective materials and workmanship. Supplementary cover may be offered under the warranty terms and contract offered by the distributor or dealer in the local country where SmartLF Gx/GxT has been supplied. In either of these circumstances if warranty service is required the customer should first contact the dealer from whom the product was purchased and the relevant warranty procedures followed.

In case of difficulty contact:

Colortrac Ltd
Kings Hall
St. Ives Business Park
St. Ives
Huntingdon
Cambridgeshire
PE27 4WY
United Kingdom

Tel: +44 (0) 1480 464618
Fax: +44 (0) 1480 464620
Web: support@colortrac.com

COLORTRAC CONDITIONS OF WARRANTY

1. The warranty will not be honoured in a situation where the ownership is in doubt or where there is no direct proof of purchase.
2. The obligations of Colortrac are limited to the repair, or at its discretion, replacement of the product or the defective part.
3. Warranty repairs must be carried out by an Authorised Colortrac Service Agent who has undergone service training by Colortrac (or their appointed distributor). No reimbursement will be made for repairs carried out by non-Colortrac agents and any such repair work and damage to the product caused by such repair work will not be covered by the warranty.
4. The product shall not be adapted or the warranty will be voided
5. This warranty covers none of the following:
   a) periodic maintenance and check-ups to replace or repair normal wear and tear items
   b) costs incurred in moving or transporting the scanner
   c) Misuse of the product or incorrect installation of the scanner.
   d) Damage caused by lightening, water, fire, or other natural causes, poor ventilation, incorrect electricity supply or any other causes beyond the control of Colortrac Ltd
6. This warranty is valid for anyone who legally acquired possession of the product inside the warranty period. Colortrac or its distributors shall not be liable for indirect or consequential loss or damage to equipment or property as a result of using the device.

28. APPENDIX 6 – DECLARATION OF CONFORMITY

Manufacturer: Colortac Ltd.
Kings Hall
St Ives Business Park
St Ives
Cambridgeshire, PE27 4WY
United Kingdom

Details Of Electrical Equipment

Model Number: SmartLF Gx 42, GxT 42, Gx 25 & GxT 25

Description: Large Format Colour Document Scanner

Directives this equipment complies with: LVD 73/23/EEC
EMC 89/336/EEC
CE Marking 92/31/EEC

Harmonised standards applied in order to verify compliance with Directive:
BS EN60950:1992
EN55024-1:1998 (+A1/A2)
EN61000: 3-3:1995 (+A1)
EN55022:1998 (+A1/A2)

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures **(note 1)**

Other Standards Applied CFR47:2005 Class A *(Pt15 Subpart B-Radio Frequency Devices – Unintentional Receiver)*

Test Report Issue by : dB Technology 30 June 2006 (R2199) Issue 1
07 Sept 2006 (R2199) Issue 2

Year in which CE mark was affixed: 2006

Issued: 12 September 2006

Signed .....
Graham Tinn
Managing Director
Colortrac Director

Note 1:- *The "domestic environment" is an environment where the use of broadcast radio and television receivers may be expected within a distance of 10 meters of the apparatus concerned.*

Federal Communications Commission (FCC) Declaration of Electromagnetic Conformity

We refer 15.21 and 15.105 of the FCC regulations:

Section 15.21 Information to user.
The users manual or instruction manual for an intentional or unintentional radiator shall caution the user that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. In cases where the manual is provided only in a form other than paper, such as on a computer disk or over the Internet, the information required by this section may be included in the manual in that alternative form, provided the user can reasonably be expected to have the capability to access information in that form.

Section 15.105 Information to the user.
(a) For a Class A digital device or peripheral, the instructions furnished the user shall include the following or similar statement, placed in a prominent location in the text of the manual:
NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Scanner CB Certification

CB certification for Gx/GxT 42 and Gx/GxT 25 scanners applies from February 2007

Scanner UL Certification

Gx/GxT 42 has UL approval. Document ref: E185864 applies.
Gx/GxT 25 is not UL approved.

Stand Accessories

CAN/CSA-C22.2 NO. 60950-1-03 + UL 60950-1 Section 4 Physical requirements
Sub section 4.1 Stability

SmartLF stand accessories (where purchased) have been tested and comply with the stability and general safety requirements of UL guidelines. The scanner accessories are intended for use only with the SmartLF and must be assembled by a responsible person following the directions provided in the kits. **(P/N: Gx 42 / Gx 25)**

P005300/P005320	**Colortrac Floor Stand Gx & GxT model**
P005301	**Colortrac Computer and LCD Monitor Mounting Kit**
P005302/P005322	**Colortrac Universal Repro Stand**
P005303/P005323	**Colortrac Catch Basket Upgrade Kit**

EU RoHS and WEEE Directives

Colortrac SmartLF products (from mid-May 2006) are manufactured in accordance with the RoHS (Restriction of Hazardous Substances) which imposes controls against the use of lead in solder and other substances harmful to the environment in the production of all new electrical equipment.

In accordance with the WEEE (Waste Electrical & Electronic Equipment) directive there is a responsibility to ensure that these devices are recycled or disposed of properly at the end of their useful life.

The WEEE directives require that:

- Any part of this device should not be disposed of as unsorted municipal waste
- The available return and collection systems should be used
- Users of electronic devices recognise that they have a role in contributing to their reuse, recycling and other forms of recovery
- Users are aware of the hazardous substances in electronic devices and that these can have a potential effect on the environment and human health

Disclaimer

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29. SMARTLF GX/GXT RANGE TECHNICAL SPECIFICATION

The SmartLF Gx/GxT (thick media) scanner model range is available in three performance levels with features optimised for different applications. If your requirements change, the m and c models can be upgraded at your premises quickly and easily using our simple scanner upgrade process.

			m	c	e
Maximum image width	Gx 25	25in (63.5cm) Image length: not limited by scanner	•	•	•
	Gx 42	42in (106.7cm) Image length: not limited by scanner	•	•	•
Maximum media width[1]	Gx 25	35in (91.4cm) Thickness: Gx 0.02in (0.5mm) / GxT 0.8in (20mm)	• / o	• / o	• / o
	Gx 42	48in (121.9cm) Thickness: Gx 0.02in (0.5mm) / GxT 0.8in (20mm)			
Scan speeds[2] in/sec		24-bit RGB colour @ 200dpi (not Turbo Mode - see note) [3] 8-bit greyscale & monochrome @ 200dpi (not Turbo Mode - see note) [3]	- 6.00	0.75 6.00	3.00 6.00
Scan accuracy[4]		+/-0.1% +/-1 pixel	•	•	•
Optical resolution		Dots per inch (dpi) (input 1200 x 600 / output 600 x 600)	1200	1200	1200
Extended resolution[4]		Linear interpolation from 100 to 9600dpi in 1 dpi steps	9600	9600	9600
Scan modes		16.7 million colour RGB (24-bit) 256 & 16 colour RGB adaptive indexed colour palette (8-bit & 4-bit) 256 level greyscale (8-bit) Black & White (1-bit)	- - • •	• • • •	• • • •
Digital image processing (Colortrac software options provide a comprehensive range of 'post scan' image processing filters and tools)		2D Intelligent Adaptive Thresholding (IAT) (1-bit mode) Fixed Threshold Black & White (1-bit mode) Dynamic Normalisation Application (DNA) with 16-bit super sampled data	• • •	• • •	• • •
Colour space		Normalised / linearised Raw RGB data	-	•	•
Colour image processing		Gamma, brightness, black & white point adjustment	-	•	•
Advanced 2+3 wheel-drive Active Paper Transport (APT)		Dual, precision ground drive rollers Dual, all-wheel-drive contour rollers with high grip rubber tyres Single, belt driven pressure roller for active media control during scans Accurate, zero maintenance optical media sensors & automatic media size detection, centre or side justified media positioning	• • • •	• • • •	• • • •
Motorised Thick Media adjustment (MTM) (GxT range)		Adapts the APT for media up to 20mm (0.8in) thick Automatic detection of optimum grip roller pressure Simple operation from scanner control panel at the touch of a button	o o o	o o o	o o o
All digital image sensor technology	Gx 25	3 x quadri-linear CCDs each with 10,800 pixels (RGB + monochrome) 3 x ultra-compact self-contained digital camera units (DCUs) 129,600 pixels (RGB triplets + panchromatic B&W) 48-bit primary point colour image capture 16-bit primary point greyscale image capture Panchromatic Black & White	• • • - • •	• • • • • •	• • • • • •
	Gx 42	5 x quadri-linear CCDs each with 10,800 pixels (RGB + monochrome) 5 x ultra-compact self-contained digital camera units (DCUs) 216,000 pixels (RGB triplets + panchromatic B&W) 48-bit primary point colour image capture 16-bit primary point greyscale image capture Panchromatic Black & White	• • • - • •	• • • - • •	• • • - • •
Light source		Twin high efficiency T5 fluorescent lamps of 5/8" (1.6cm) diameter	•	•	•
Optics	Gx 25	3 x micro lens with integral infra red filter	•	•	•
	Gx 42	5 x micro lens with integral infra red filter			
User status & one touch operation		LCD panel (scanner status, mode & settings), stop, forward & rewind Scan / Copy buttons Open / Close buttons (GxT range)	• • o	• • o	• • o
Scanner maintenance and user replaceable parts		Customer installable, plug 'n' play scanner Precision media calibration with DNA 16-bit super sampled data Chemically treated, scratch resistant scan glass	• • •	• • •	• • •
SmartLF software (included)		Colortrac SmartLF ready-to-run software with: Scan_to_file with real-time image viewer Scan_to_copy with real-time image viewer Scan_to_email with real-time image viewer Drivers, TIFF, JPEG, PDF file formats	• • • •	• • • •	• • • •
Interface (included)		USB2 / 2m USB2 cable / local power cable / rear media supports Windows Image Acquisition (WIA) / Still Image Interface (STI)	• •	• •	• •
Dimensions & weight	Gx 25	44.9in wide x 6.7in high x 14.4in deep (114 x 17 x 37cm) 84Lbs (38kg)	•	•	•
	Gx 42	56.7in wide x 6.7in high x 14.4in deep (144 x 17 x 37cm) 102Lbs (46kg)			
Power requirements	Gx 25	220~240VAC, 50~60Hz, 240VA (scanning)	•	•	•
	Gx 42	90~250 VAC autosensing, 47~63 Hz, 240 VA (scanning)			
Scan software		ScanWorks ~ professional scan_to_archive & post scan image processing	o	o	o
Copy software		CopySmart ~ professional scan_to_print with IT8 colour matching	o	o	o
EDC software		ISIS™ driver ~ connect seamlessly to EDM systems & database	o	o	o

Scanner accessories	BOTH	PC & LCD monitor mounting kit (floor stand is required)	o	o	o
	Gx 25	Floor stand 30.7in high x 21.7in deep (78 x 55cm) 20Lbs (9kg) Paper catch basket (floor stand is required) Universal repro stand with PC & LCD monitor mounting kit 63.2in wide x 61in high (max incl. scanner) x 29in deep (161 X 155 x 74cm) 100Lbs (44kg), max permissible printer height 49in (125cm)	o o o	o o o	o o o
	Gx 42	Floor stand 30.7in high x 21.7in deep (78 x 55cm) 29Lbs (13kg) Paper catch basket (floor stand is required) Universal repro stand with PC & LCD monitor mounting kit 75in wide x 61in high (max incl. scanner) x 29in deep (189 X 155 x 74cm) 113Lbs (51kg), max permissible printer height 49in (125cm)	o o o	o o o	o o o

• standard o optional - not supported

[1 Media wider than 43in may exhibit some degradation in the image.] [2 The scan rate is proportional across the full range of resolutions supported by the scanner. Actual scan times will depend on the host system performance. Quoted top speeds decrease for originals wider than 24in and are not guaranteed for all media types.] [3 Turbo Mode speeds can be twice as fast as regular non-turbo speed ratings but offer virtually no image quality gains over scans made at half the quoted resolution. Turbo mode scanning uses digital software interpolation to double the resolution in the paper direction to simulate higher resolution scanning.] [4 The quoted scan accuracy is valid for media up to 0.5mm thick and may vary depending on the operating environment and the type & thickness of media. Colortrac measures accuracy by scanning a paper original printed with a square target. The pixel co-ordinates of the target image are measured and compared with the known dimensions of the original. SmartLF Gx 42 scanners are tested at 20^0C +/- 3^0C, 60% +/- 10% RH.] [5 The maximum resolution selectable for an image is limited by the file format specified & the available disk space.] [Colortrac recommends Intel Pentium, Core Duo, Core 2 Duo, HT (Hyper-Threading) and AMD Athlon Dual Core processors, at least 512MB RAM, USB2 and Windows™ XP Home, Windows™ XP Professional or Windows™ Vista operating systems. SmartLF drivers support 32-bit and 64-bit processor architectures. Contact your supplier for advice on the optimum system configuration for your application.] [Colortrac SmartLF Gx 42 scanners comply with CB, CE, FCC, UL and RoHS standards and regulations.] Colortrac Ltd makes no warranty of any kind with respect to the information contained in this document and reserves the right to change specifications without notice. Colortrac and Smart LF® are trademarks of Colortrac Ltd. All other trademarks are the property of their respective owners. Copyright © 2007 Colortrac Ltd.

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NOTES

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